

TEMPLE CONSERVATION COMMISSION

Final Minutes, January 9th, 2019

Location: Town Hall, Annex room

Attendees: Lincoln Geiger, Sean Radcliffe, Honey Hastings, Ult Mundane, Adie Krulis

Missing: Cathy Joly

Guest: Tim Fiske

Started at 7:34 pm

Report from Tim Fisk concerning culverts and bridge: Tim Fiske gave an in depth explanation of aging and repairing culverts and bridges, specifically in Temple. Tim spoke for one hour. See addendum for summary of his talk.

Annual report (Sean): Sean asked the group if there were specific items recommended for the annual report. The group listed the following items that should be included: Water Testing project, culvert projects, trail crossing Rt 45, mission and goals statements development, outreach to Girl Scouts, table at the Holiday Craft Fair. Honey stated the annual report was due Friday 1/11 but no committees or commissions were going to have their reports done by Friday 1/11. Sean Radcliffe commented he received no notice of the deadline. *Sean Radcliffe would write up the annual report the coming weekend.*

Water testing project planning: Honey Hastings commented Peter Caswell would be interested in speaking at the annual water testing project presentation. The group agreed the water presentation would be on a Wednesday or Thursday in first or second week of April followed by water kit collection on the following Sunday.

New members: The group voted unanimously to recommend Scott Hecker to be appointed by the BOS. *Sean Radcliffe would contact BOS with the Commission's' recommendation.*

LUCT funds for Conservation Fund (Honey): Honey had prepared a potential warrant article for increasing the LUCT fund percentage to Temple's conservation fund account. There was a group discussion about the details. Honey shared with the group the percentages from other towns in New Hampshire. The group unanimously agreed a new warrant article should state that 100% of LUCT funds should go to Temple's conservation fund account up to \$20,000 and then 50% beyond \$20,000. *Honey will write up the warrant article and share with commission via email. Other members showed interest in getting signatures for the warrant article.*

John Barry land: Lincoln asked Sean to put John Barry land on the agenda for February. *Sean Radcliffe said he would add John Barry land to on next agenda.*

Heather White/Pratt/Stone conservation land: Sean offered an update on the state of Heather White/Pratt/Stone monitoring. The land owners agreed to have the property cleaned up by May 1st. *Sean Radcliffe will schedule a monitoring of the property in May.*

The group decided it would meet at 7:00 PM (instead of 7:30 PM) on second Wednesday going forward.

The group adjourned at 9:35 pm. Next meeting will be Wednesday, February 13th, 2019 at 7:00 PM. Minutes submitted by Sean Radcliffe. *Italics above indicate tasks to be done.*

Addendum: Details of Tim Fisk's talk of bridges and culvert

UNH had done a study of all Temple culverts of stream crossing several years ago.

The DES issue of the repaired culvert on Moran Road is complete but it isn't known if the case is closed. They had to have a wetlands scientist Earl Sanford review the site. DES requires studies whenever repairing or replacing culvert or bridge in wetlands area. These studies can take 8 months to complete.

Historically, the wetlands board didn't like concrete bottom culverts and bridges; they prefer gravel bottoms. But gravel bottoms have the problem of scouring and washout. The wetlands board are starting to drift away from recommending gravel bottom. Gravel bottom culverts and bridges will have stability problems unless their footings are 6 feet deep. The time building a gravel bottom, concrete culvert or bridge takes longer, meaning there is longer time the waterway is disturbed. Box type concrete bottom culverts are cheaper and quicker to get in place.

Old concrete tube culverts were made in short segments. They can fail by being pushed up at the seams in the middle of the road by frozen ground. Then the water can pour down into the middle of the road making the situation much worse. Today's concrete segments usually have overlapping segments and are big and heavy enough to withstand frozen ground pressure.

There are several different types of culverts: aluminum, galvanized steel, concrete and plastic. Galvanized steel was supposed to be cheaper alternative to aluminum. Concrete is expensive. Plastic is easy and cheap, best only used for non-waterway culverts. We have a 36" plastic culvert on Kulgren Road. It is best to use concrete for anything of significant size.

Galvanized culverts were supposed to last several decades but have proven to only last about 1 decade because of acid in water. The galvanized culverts corrode from bottom and slowly collapse. Acid rain makes this corrosion worse and occur faster.

Temple has some all stone culverts/bridges. They are only on gravel roads and are easy to repair.

The granite canal at the end of Old Revolutionary Road will need help in future. Trees are destroying the field side of the canal. The weight of the road is affecting the other side. The canal was put in many years ago to help the field drain.

Tim said in years past his crew was able to extend the life of a steel culvert on Hadley by pouring concrete on the bottom of the culvert. Today it would be replaced with a bridge.

There is new way to identify culverts and geography using LIDAR imaging. The LIDAR images show the terrain without trees and vegetation, exposing the culverts and bridges easier.